

## REMARKS

The Examiner is thanked for the extensive and in depth examination of the application.

The Examiner rejected claims 1-37 under 35 U.S.C. § 112 as failing to comply with the enablement requirement and as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. These rejections appear to be based upon the use of the words “wound” or “wounded” and the use of the phrase “blood vessel promoting agent.” These words or phrases have been eliminated from the amended claims. Claim 28 has been amended to recite 899nm to 1200nm which is supported in the specification on page 9, lines 12-13. Claim 29 may, thus, properly depend from claim 28.

The Examiner rejected claims 1-4, 14-16, and 19-20 under 35 U.S.C § 102 (b) as being anticipated by Kye YC and Ho et al. Claims 1-20 are hereby cancelled without prejudice or disclaimer.

The Examiner rejected claims 1-10, 14-16, 19-23, 26-29, and 33-37 under 35 U.S.C. § 103 (a) as being unpatentable over Tankovich et al. (6050990) in view of Ho et al. Tankovich et al. teaches the use of a nd:YAG laser with a wave length of 1064nm to remove scar tissue. The containment must explode with sufficient energy to tear off cells of the scar tissue upon absorption of the laser energy, and 5 or 6 passes of the laser across the scar in each treatment must be performed, or until erythema or minor inflammation is detected in the scar area. Thus, the scar tissue is subjected to numerous laser pulses in order to destroy and remove the scar tissues (see column 59). The Applicant’s method of laser treatment does not destroy skin tissue but leaves the epidermis intact and does not cause inflammation (only 2 or 3 layers of dead cells on the stratum corneum are removed). In the applicant’s method the removal of the carbon particles with the laser light only requires a single pass across the skin. That is why the entire face can be scanned within 2 to 10 minutes. One of ordinary skill in the art would know that the skin under these conditions would be exposed to only about 1 or 2 pulses of laser light (see page 9, lines 7-10 of the application). Thus, the disclosure in the Tankovich regarding scar removal does

not suggest the Applicant's method nor would motivate one of ordinary skill in the art to use the Applicant's laser method because Tankovich suggests that Applicant's laser method would not have any beneficial cosmetic effect or prevent hair growth.

The Examiner states that Tankovich includes using a Nd:YAG laser with a pulse frequency of 10 pulses per second and a fluence of about 2 to 3 J/cm<sup>2</sup>. The duration of the pulse can be 10ns to 30ns. However, the use of short pulses of 10ns to 30ns is only for pretreatment to synchronize hair growth prior to the hair removal process. The skin is illuminated with one or two short pulses of light (see column 10, lines 21-24 and lines 36-40). This Tankovich laser treatment does not destroy the hair follicle, remove the hair, or prevent hair growth. Applicant's laser method also does not destroy the hair follicle or prevent hair growth. Tankovich teaches that, as a general rule, the shorter the pulse duration the greater the danger of causing undesirable destruction of the skin (see column 37, lines 45-49). Thus, several pulses of short duration applied to the skin will likely cause skin damage, but one or two pulses does not produce any damage or any beneficial effect regarding improving the appearance of the skin. Accordingly, one would not be motivated to use the Tankovich method of one or two pulses of short duration applied to the skin because there is no suggestion of any cosmetic benefit.

The Examiner states that the Tankovich method can be used to treat herpes infections using wave length of 1064nm, fluence of 1-2 J/cm<sup>2</sup>, and a pulse energy of 0.5J/pulse. There is no teaching or suggestion that this method of Tankovich produces any cosmetic benefit to the skin. Thus, one would not be motivated to use this method to improve the appearance of the skin.

In general, Tankovich teaches away from the Applicant's invention because the disclosures indicate that one or two pulses of short duration on the skin with laser light of 1064nm and 1-2J/cm<sup>2</sup> do not have any appreciable cosmetic benefit. In addition, one of ordinary skill in the art would know this fact and would not consider this method of Tankovich useful to improve the appearance of the skin.

The Examiner states that Tankovich does not teach the pretreatment or post treatment of the Applicant's method. The Examiner states that Ho teaches a laser resurfacing method that comprises treating patients with 0.05% retinoic acid, hydroquinone, and desonide cream for two to four weeks, treating the skin with laser light at 250-450 millijoules per pulse, with a 200,000 microsecond pulse duration over a 4mm spot size, and using tretinoin, hydroquinone, desonide and sunscreen with repeated use after the laser therapy. Ho does not teach or suggest the use of retinoic acid (tretinoin) as the sole pharmacologic agent for use in combination with a laser treatment method, which laser treatment method by itself does not produce any cosmetic effect on the skin. Ho uses a pulse duration at least 200 times greater than the pulse duration in the Applicant's method. Ho's method produces resurfacing of the skin by heating the skin which results in persistent erythema. Ho's procedure also produces dyspigmentation which can be reduced by pre- and post-treatment with tretinoin plus several other drugs. There is no suggestion by Ho that tretinoin alone would enhance the cosmetic effect produced by his laser method. Furthermore, Ho's laser method would not be expected to leave the epidermis intact or to be useful with laser pulses of short duration, or that retinoic acid would be useful with a laser method that requires the use of exploding a surface contaminant so as not to heat the skin and damage the epidermis. The Applicant's method uses a laser treatment which, by itself, does not produce any appreciable cosmetic effect. The Applicant's method also uses a topical drug, retinoic acid, at a concentration which, by itself, does not produce any appreciable cosmetic effect. What the Applicant has discovered is that her laser method plus the topical application of a low concentration of retinoic acid produce a synergistic effect to improve the appearance of the skin without damaging the skin, and leaving the epidermis intact. There is no suggestion in the combination of Tankovich and Ho that retinoic acid by itself at 0.05% applied to the skin would cause the Tankovich method (exploding a contaminant on the skin with laser pulses of short duration which leaves the epidermis and hair follicles intact) to produce a cosmetic effect. Thus, one would not be motivated by the combination of Tankovich and Ho to combine retinoic acid at

0.05% with a laser method that explodes a contaminant on the skin with laser pulses of short duration which leaves the epidermis and hair follicles intact.

Claim 21 has been further amended to claim a process for improving the appearance of skin and includes the elements of using pulse durations of 0.001 to 1 microsecond and leaving the epidermis intact. As such, amended claim 21 is not obvious over Tankovich in view of Ho and is, therefore, allowable. Support for the amendments to claim 21 are found in the specification on page 9. Claims 23-28 and 35-36 are amended to be consistent with claim 21. Claims 24 and 25 were amended to refer to the face. Support for these amendments is found in the specification on page 9, lines 7-10. Claims 22 and 30-32 are hereby cancelled without prejudice or disclaimer. Since claims 23-29 and 33-37 depend from an allowable claim they are, thus, also allowable.

### CONCLUSION

In light of the foregoing amendments and remarks, the Applicant respectfully requests the Examiner withdraw the rejections and objections and allow all the pending claims.

Respectfully submitted,



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